

Educating for Sustainability: A cross-continent, collaborative, interdisciplinary, case-based course

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Introduction

Sustainability in Global Industrial Companies is a course conceived of, and first delivered by Thomas Lennerfors and Jonathan Woodward for students at Uppsala University and the University of Tokyo in spring 2016.

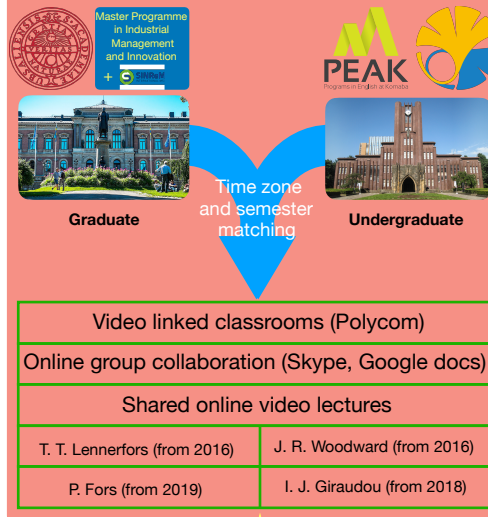


During a STINT sponsored stay at The University of Tokyo in 2014/2015, the idea of co-teaching a course involving students from different disciplines at universities on opposite sides of the world took shape after Woodward joined Lennerfors' class as an observer,

leading to a number of enthusiastic and energetic discussions and evidence of the relative simplicity and efficacy of video-linked classroom discussions.

The course draws on a number of methods in active learning to create a unique experience that allows students to work together in cross-continental teams to address issues of economic, social and environmental sustainability by studying the real-world cases of a series of global industrial companies which deal with a broad range of issues from the perspectives of a range of different stakeholders. Here, the key pedagogical aspects are presented along with some contextual aspects that highlight the circumstance and environment required to realize the delivery of such a course.

Cross-continent



Timeline

August 2014

T. T. Lennerfors visits UTokyo as Visiting Professor (STINT) and teaches 2 courses on ethics and sustainability

October 2014

J. R. Woodward joins class for peer review. Woodward and Lennerfors discuss teaching and learning and faculty development extensively.

March 2015

Lennerfors returns to UTokyo, invited by UTokyo GFD initiative. Woodward and Lennerfors decide to try inter-institutional course exploiting internet.

March 2016

Lennerfors returns to UTokyo. Course is delivered for first time. Lennerfors returns to Uppsala to teach 2nd half of course.

March 2018

I. Giraudou joins course. Course is delivered for the 2nd time.

March 2019

P. Fors joins course. Course will be delivered for the 3rd time.

Interdisciplinary

Students

UPPSALA	TOKYO
Engineering Business Management	Liberal Arts Environmental Sciences / Humanities and Social Sciences

Faculty

T. T. Lennerfors	Industrial strategy and innovation, ethics and sustainability.
J. R. Woodward	Chemistry, biophysics
I. J. Giraudou	Environmental Legal Studies, International Law

Contents



Sustainability In Global Industrial Companies

Case-based

Based on Harvard Business Case studies

- Nike – general sustainability strategy
- Intel – conflict minerals
- Royal Caribbean – general sustainability strategy
- Pfizer – green chemistry
- IKEA – responsible wood products

Example: Intel & conflict minerals

- How did Intel manage the issue of conflict minerals? (based on existing case study)
- Critical documentary
- Comparison with Apple, JP companies, SW companies, and Fairphone
- Suggest Intel's future strategy on conflict minerals

Challenges

- Matching of semesters and classroom timing is tricky and must be planned well in advance.
- Non-standard course - needs organizers to have some influence in their departments.
- Technical issues (poor internet connection, speaking simultaneously with delay etc) can be distracting.
- Initial preparation is time consuming. Marking students reports is demanding.
- Increasing imbalance in number of students at the two institutions.
- Students may need more focussed training on how to work together outside class.

Modifications and additions

In March of 2018, the course was run for a second time. Some changes made were as follows:

- Extended resources available for case research, provided online for access to both institutions.
- The introduction of I. J. Giraudou at UTokyo. All the cases were revisited from a legal perspective and basic lectures on legal aspects were added along with specific legal perspectives for each case.
- Interaction between students from both institutions was more extensive from the outset.
- Online session discussion was streamlined to address student numbers.

Collaborative

Level of collaboration increased as course progressed:

Case 1 : Nike:

- UU students analyse economic sustainability, UT students analyse social & environmental sustainability.
- "Work in the same google docs"

Case 2 : Intel:

- Four parts of the assignment. UU and UT students should divide the work by themselves

Case 3 : Royal Caribbean:

- UT students analyse economic sustainability, UU students analyse social & environmental sustainability.
- "Make a synthetic strategic plan together"
- Joined by corporate representative

Case 4 Pfizer:

- Three sub-teams are created in each groups. Each sub-team is responsible for doing one part of the assignment.
- Each sub-team consists of 1-2 UU students and 1-2 UT students.
- Joined by corporate representative

Case 5 Ikea:

- UT and UU students organise the work and solve the case together.

Conclusions

Stimulating and effective educational approach which:

- Engages students.
- Integrates student diversity.
- Drives student intrinsic motivation for study.
- Enables true interdisciplinary study and discussion.
- Allows students to view problems from multiple perspectives in a very natural way, especially local contexts.
- Fosters critical thinking.
- Substantial peer-based teaching and learning experience.
- Provides experience of international collaboration.
- Meaningful and realistic team-working.
- Inspires and educates faculty.
- Low cost once established.
- Sustainable (no movement of teachers required).
- Provides good understanding of business performance.



References

'Shouldn't We Expect More From Case-Based Learning? The Transformative Potential of Multidisciplinary Frameworks in Sustainability Education', I. Giraudou, T. T. Lennerfors and J. R. Woodward, *Transformative Dialogues : Teaching and Learning*, Special Issue : Transformative Global Partnerships, vol. 11, Issue 3 (2018).

Additional, more detailed articles currently in preparation.